

REMARKS

After entry of the foregoing amendment, claims 1-5 and 7-35 are pending. Claim 6 has been cancelled. Claim 35 is new. Claims 1, 11, and 13 have been amended. Claims 14-25 have been withdrawn as drawn to a non-elected invention. Support for the amendments to claims 1, 11, and 13 can be found at least in the original claims and throughout the specification. Support for new claim 35 can be found at least in original claim 1. Applicants thank the Examiner for the indication that claims 33-34 contain allowable subject matter.

Applicants thank the Examiner for the courtesies extended during the interview of October 26, 2004. During the interview, the enclosed claim amendments were discussed, as were the cited references.

Rejections under § 102

Claims 1-5, 7-9, 11-13, and 32 stand rejected under 35 U.S.C. § 102(b or e) as anticipated by U.S. Patent No. 5,626,630 (Markowitz et al.) or U.S. Patent No. 5,861,019 (Sun et al.). The Office Action cites Markowitz et al. and Sun et al. as teaching a telemetry system that uses transmission frequencies in the 0.5 GHz to 5 GHz frequency range using microstrip antennas.

Applicants respectfully submit that Markowitz et al. and Sun et al. do not anticipate the claimed invention for at least the following reasons. “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” MPEP §2131.01 *citing Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). Applicants have amended claim 1 to indicate that the system transmits “power between a first location external of a living body and a second position internal of the living body . . . wherein the power source is adapted to emit high frequency electromagnetic radiation between 0.5 to 5 GHz; and wherein the primary controller and the antenna based device do not communicate by inductive coupling.”

(Language of claim 1.) Markowitz et al. (column 4, lines 62-63) and Sun et al. (column 12, lines 5-6 and 15-17) teach the use of a battery in the implanted device to provide power. The transmission using high frequency radiation is limited to the transmission of information. (Markowitz et al. at column 9, lines 16-20 and Sun et al. at column 11, lines 17-60 discuss data rates.) Applicants respectfully submit that Markowitz et al. and Sun et al. do not teach the transmission of power using high frequency electromagnetic radiation between 0.5 to 5.0 GHz wherein the communication is not through inductive coupling, and therefore, do not anticipate claim 1. Applicants respectfully request that the rejection of claim 1 be withdrawn.

As claims 2-5, 7-10 and 26-31 are dependent, either directly or indirectly, on claim 1, Applicants respectfully submit that claims 2-5, 7-10 and 26-31 are patentable over Markowitz et al. and Sun et al. for at least the reasons expressed above with respect to claim 1. Therefore, Applicants respectfully request that the rejection be withdrawn.

Applicants have also amended claim 11 to indicate that the claimed method comprises the transmission of power between a location external of a living body and a location internal of the living body using high frequency electromagnetic radiation between 0.5 to 5 GHz wherein the primary controller and antenna based device do not communicate by inductive coupling. As neither Markowitz et al. nor Sun et al. teach the transmission of power at the claimed frequency range wherein the communication is not through inductive coupling, Applicants respectfully submit that the cited references do not anticipate claim 11. Therefore, Applicants respectfully request that the rejection be withdrawn.

As claims 12-13 are dependent on claim 11, Applicants respectfully submit that claims 12-13 are patentable over Markowitz et al. and Sun et al. for at least the reasons expressed above with respect to claim 11. Therefore, Applicants respectfully request that the rejection be withdrawn.

Rejection Under § 103

Claims 1-5, 7-13, and 26-31 stand rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 5,967,986 (Cimochowski et al.) in view of Markowitz et al. and Sun et al. The Office Action cites Cimochowski et al. as teaching a primary controller and an antenna based stent device that receives power and transducer selection data from the primary controller to select various transducers to monitor various characteristics such as flow and transmit the results back to the primary controller. The Office Action acknowledges that Cimochowski et al. teaches only coil to coil inductive coupling and cites Markowitz et al. and Sun et al. as teaching microstrip antennas for operation within the 0.5 to 5 GHz range.

“To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.” MPEP § 2143.03 *citing In re Royka* 490 F.2d 981 (CCPA 1974). In addition, 1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify or combine the teachings, and 2) there must be a reasonable expectation of success. MPEP § 2142. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Applicants respectfully assert that the Office Action does not set forth a *prima facie* case of obviousness with regard to the outstanding rejections.

Claim 1 is directed to a system that transmits “power between a first location external of a living body and a second position internal of the living body . . . wherein the power source is adapted to emit high frequency electromagnetic radiation between 0.5 to 5 GHz; and wherein the primary controller and the antenna based device do not communicate by inductive coupling.” (Language of claim 1.) As is stated above, Cimochowski et al. only teaches or suggests coil to coil inductive coupling. It does not teach or suggest the use of

non-inductive coupling. Although Markowitz et al. and Sun et al. teach the use of the claimed frequency range this is only for the transmission of information, they both teach the use of battery to power the implanted device and neither reference teaches the ability to power a device without the use of inductive coupling. One of ordinary skill in the art would not combine a teaching to use coil to coil inductive coupling for power with a teaching to use a battery for power to come up with the claimed invention. Therefore, Applicants respectfully submit that the cited references do not teach or suggest every element of the claimed invention.

Moreover, one of ordinary skill in the art would not find a sufficient suggestion or motivation to combine the disclosures in the references or in the knowledge of the art itself. There is no teaching in the art that the claimed frequency ranges could be used to power the system wherein the communication did not occur by inductive coupling. Thus, one of ordinary skill in the art would not be led to use the frequencies of Markowitz et al. or Sun et al. to power the device. At best, one would need to rely on hindsight to come up with the claimed invention from the combination of Cimochoowski et al., Markowitz et al. and Sun et al. “To draw on hindsight knowledge of the patented invention, when the prior art does not contain or suggest that knowledge, is to use the invention as a template for its own reconstruction— an illogical and inappropriate process by which to determine patentability.” *Sensonic, Inc. v. Aerosonic Corp.*, 81 F.3d 1566, 1570 (Fed. Cir. 1996). Therefore, Applicants respectfully submit that claim 1 is not obvious in view of the cited references and request that the rejection be withdrawn.

As claims 2-5, 7-10, and 26-31 are dependent, either directly or indirectly, on claim 1, Applicants respectfully submit that claims 2-5, 7-10, and 26-31 are patentable over the cited references for at least the reasons cited above with respect to claim 1. Therefore, Applicants request that the rejection of claims 2-5, 7-10, and 26-31 under § 103(a) be withdrawn.

Claim 11 is directed to a method that comprises the transmission of power between a location external of a living body and a location internal of the living body using high frequency electromagnetic radiation between 0.5 to 5 GHz wherein the primary controller and antenna based device do not communicate by inductive coupling. As is discussed above with respect to claim 1, the cited references do not teach every element of the claimed invention as they do not teach or suggest the use of the claimed frequency range to provide power without inductive coupling. Moreover, there is no suggestion or motivation to combine the cited references as there is no indication in the art that the claimed frequency range can be used to provide power without inductive coupling. Therefore, Applicants respectfully submit that claim 11 is patentable over the cited references and request that the rejection be withdrawn.

As claims 12-13 are dependent on claim 11, Applicants respectfully submit that claims 12-13 are patentable for at least the reasons as expressed above with respect to claim 11. Therefore, Applicants request that the rejection be withdrawn.

Claim 32 stands rejected as obvious under 35 U.S.C. § 103(a) as unpatentable over Cimochoowski et al. in view of Markowitz et al. or Sun et al. and further in view of U.S. Patent No. 5,170,802 (Mehra et al.). The Office Action cites Mehra et al. as teaching the use of stents for pacing. Applicants respectfully submit that claim 32, which is indirectly dependent on claim 1, is patentable over the cited references for at least the reasons discussed above with respect to claim 1. Mehra et al. does not cure the deficiencies discussed above with respect to Cimochoowski et al., Markowitz et al., and Sun et al. Therefore, Applicants respectfully request that the rejection be withdrawn.

CONCLUSION

In view of the foregoing, Applicants respectfully submit that the claims as amended are in condition for allowance. The Examiner is invited to contact the undersigned by telephone should any issues remain with respect to the application.

Respectfully submitted,



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